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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/074,135

02/12/2002

Peter Thoma

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03/23/2005

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EXAMINER

RODRIGUEZ, ARMANDO

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/074,135	Applicant(s) THOMA ET AL.	
	Examiner ARMANDO RODRIGUEZ	Art Unit 2828	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5,7,8 and 13-19 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,7,8 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 4,5,18 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Claims 1-5,7,8,13-19 are pending.

Claims 6,9-12 have been canceled.

The 35 USC 112 second paragraph rejection claim has been withdrawn based on applicant's amendment filed on December 27, 2004.

### ***Response to Arguments***

Applicant's arguments, see pages 5-9, filed December 27, 2004, with respect to the rejection(s) of claim(s) 1-5,7,8,14-19 under 35 USC 103 and claim 13 under 35 USC 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Svilans (PN 6,556,599) and Heffelfinger (PN 5,266,803).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,3,7,13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Svilans (PN 6,556,599) in view of Heffelfinger (PN 5,266,803).

Regarding claims 1 and 13,

Svilans illustrates in figure 1 a semiconductor light source (10) [applicant's laser medium] having front facet (24) and rear facet (18) column 3 lines 1-12, a mirror (36) [applicant's cavity end mirror] column 3 line 27-29, a tuned filter (12) [applicant's wavelength tunable filter] which is disposed between the light and the mirror and a GRIN lens (30) [applicant's focusing optics] for focusing the light at the mirror, column 3 lines 28-30. Column 3 lines 29-31 describe the mirror (36) reflecting the light back into the light source. Column 5 lines 7-23, discloses the GRIN lens as having a coating and describes the GRIN lens as preferred but other forms of unitary retroreflector can be used.

Svilans is silent as to the mirror having a curved shape.

Heffelfinger illustrates in figure 7 a focusing lens (5) with a reflective coating (21) which forms a curved reflective surface. The lens and coating form a single unit which reflects, which may be considered a unitary retroreflector.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the lens of Heffelfinger with the laser device of Svilans because the lens of Heffelfinger will provide an advantageous ease of

manufacture since it does not involve separate, air-spaced retroreflector elements, column 5 lines 20-24 of Svilans.

Regarding claim 3,15,

As illustrated in figure 1 of Svilans the semiconductor light source does provide output light through rear facet (18).

Regarding claim 7,14,

Column 4 lines 52-59, discloses extracting light from the end surface (34) by reducing the reflectance of mirror (36).

Claims 2,8,16,17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Svilans (PN 6,556,599) in view of Heffelfinger (PN 5,266,803) as applied to claims 1 and 13 above and further in view of Loh et al (PN 5,172,382).

Regarding claims 2,8,16 and 17,

The combination of Svilans and Heffelfinger do not illustrate a beam splitter in a spatially linear cavity.

However, the use of beam splitters in the laser systems is notoriously well known in the art for separating the beam and directing the beam in different directions, as documented in 1992 and illustrated in figures 1 and 6 of Loh et al.

***Allowable Subject Matter***

Claims 4,5,18,19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: None of the cited prior arts alone or in combination discloses or suggest the claimed laser having the recited limitations of dependent claims 4 and 18, in particular the limitation of at least one of the laser medium or the end mirror is movable to adjust a length of the optical path.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARMANDO RODRIGUEZ whose telephone number is 571-272-1952. The examiner can normally be reached on 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ARMANDO RODRIGUEZ  
Examiner  
Art Unit 2828

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